UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,655	08/23/2001	Helmut Hartl	011072	7907

23850 7590 09/05/2003

ARMSTRONG,WESTERMAN & HATTORI, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

EXAMINER
MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 09/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/934,655	HARTL ET AL.
	Examiner	Art Unit
	Sanza L McClendon	1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *3,4 and 10-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,7 and 8* is/are rejected.

7)☒ Claim(s) *2,6 and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2/4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-2 and 5-9 drawn to a 4-methylene-1, 3-dioxolane compounds and a process of making, classified in class 549, subclass 455.

II. Claims 3-4 and 10-13, drawn to a 4-methylene-1, 3-dioxolane compounds and a process of making, classified in class 549, subclass 450.

III. Claims 14-16, drawn to a photocationic composition, classified in class 522, subclass 169.

1. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of being used together and they are two distinct compounds.

2. Inventions I and III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a component in a copolymer verses a crosslinking agent, while additionally the compound of group I will lose it' s identity once exposed to irradiation and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds

one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as being useable together. The compositions of claims 14-16 do not require the compound of group II.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Stephen Adrian on July 24, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-2 and 5-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3-4 and 10-16 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

8. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sokolov et al (translated abstract of Latvijas PSR Zinatnu Akademijas Vestis, (6), 667-72, 1964).

Sokolov et al teaches the preparation of 1,2-bis (4-methylene-1, 3-dioxolan-2-yl) ethane. This anticipates the compound of claim 1 when m = 0, n=2, X is a single bond and o =2.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Orth (DE 906514).

Note: chemical abstract number 52:59140 is being used as an English language translation.

Orth teaches the preparation 2,2-bis (4-methylene-1, 3-dioxolan-1, 4-yl) butane. This appears to anticipate claim 1, when m = 0, n=4, X is a single bond, and o =2.

Claim Rejections - 35 USC § 102/35 USC § 103

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claim 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sokolov et al (translated abstract of Latvijas PSR Zinatnu Akademijas Vestis, (6), 667-72, 1964).

Sokolov et al teaches dehydrochlorination of 1,2-bis- (4-chloromethyl-1, 3-dioxolane-2-yl) ethane to obtain 1,2-bis (4-methylene-1, 3-dioxolan-2-yl) ethane. Sokolov et al does not expressly teach reaction temperatures between 0 °C and 150 °C, however because the abstract is silent to the temperature the examiner deems that the reaction temperature is at least room temperature, which is anticipated by the temperature range in instant claim 5. However, in the alternative, it would have been obvious for a skilled artisan to use a reaction temperature between 0 °C and 150 °C, the motivation would have been the expectation of adequately assisting the reaction of the base, i.e. to slow a very exothermic reaction or the speed an endothermic reaction depending on the reaction process, in the absence of evidence or arguments to the contrary.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sokolov et al (translated abstract of Latvijas PSR Zinatnu Akademijas Vestis, (6), 667-72, 1964).

Sokolov et al does not expressly teach in the abstract using a solvent in the preparation of 1,2-bis (4-methylene-1, 3-dioxolan-2-yl) ethane. However, Sokolov et al teaches using a powder form of the base KOH. The examiner contends that it would have been obvious for a skilled artisan to use a solvent to dissolve the KOH in the reaction preparation. The motivation would have been a reasonable expectation of dissolving the KOH for use in obtaining the desired in the absence of arguments/evidence to the contrary.

Allowable Subject Matter

16. Claims 2, 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach the compounds listed in claim 2 or the particular reaction temperatures and bases in claims 6 and 9 in obtaining 4-methylene-1, 3-dioxolane compounds having the general formula found in claim 1.

Conclusion

18. The prior art, particularly Latvijas PSR Zinatnu Akademijas Vestis, (6), 667-72, 1964, made of record in this rejection has been ordered and will be sent for translation. When copies become available the examiner will provide applicant with such.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L McClendon whose telephone number is (703) 305-0505. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner' s supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0657.

Sanza L McClendon
Examiner
Art Unit 1711

SMc

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700